

5                   **MULTI-LAYER ENGINE USING GENERIC CONTROLS**  
                    **FOR OPTIMAL ROUTING SCHEME**

**ABSTRACT OF THE INVENTION**

          A scheduling engine for optimally scheduling the  
allocation of a set of service providers to a defined  
10 set of service points includes a service point  
mechanism for collecting and processing a plurality of  
service point data elements, and a service provider  
mechanism for collecting and processing a plurality of  
service provider data elements. A generic multi-layer  
15 scheduling mechanism generates allocation schedules for  
allocating the set of service providers to the set of  
service points irrespective of nonlinearity or  
dependence amongst said plurality of service point data  
elements and said plurality of service providers data  
20 elements. The generic multi-layer scheduling mechanism  
employs a heuristic algorithm for use of an objective  
function relating to said plurality of service point  
data elements and said plurality of provider data  
elements and said control parameters that describe what  
25 is important to the customer and generating therefrom  
an optimal allocation schedule.